



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

NORTHERN REGIONAL OFFICE

13901 Crown Court, Woodbridge, Virginia 22193

(703) 583-3800 Fax (703) 583-3821

www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

Thomas A. Faha
Regional Director

22 May 2015

Ms. Amy Wyks, P.E.
Director of Utilities
Town of Leesburg
25 W. Market Street
Leesburg, VA 20176

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Re: Reissuance of VPDES Permit No. VA0092282
Leesburg Water Pollution Control Facility
Loudoun County

Dear Ms. Wyks:

The Department of Environmental Quality (DEQ) has approved the enclosed effluent limitations and monitoring requirements for the aforementioned permit. Copies of your permit and fact sheet are enclosed.

A Discharge Monitoring Report (DMR) form is no longer included in the reissuance package. DEQ has launched an electronic DMR (eDMR) program that allows you to submit the effluent monitoring data electronically and we expect every permittee to use eDMR as permits are issued or reissued.

Answers to frequently asked questions about the eDMR system, including the eDMR registration process, are available at the following website: <http://www.deq.virginia.gov/Programs/Water/PermittingCompliance/ElectronicDMRsubmissions.aspx>.

The first electronic DMR submittal for the month of June 2015 is due by 10 July 2015. Please reference the effluent limits in your permit and report monitoring results in eDMR to the same number of significant digits as are included in the permit limits for each respective parameter. The regional contact for eDMR is Rebecca Vice; she may be contacted at 703-583-3922 or via email at Rebecca.Vice@deq.virginia.gov.

Please note that compliance with the permit's requirements for use and disposal of sewage sludge does not relieve you of your responsibility to comply with federal requirements set forth in 40 CFR Part 503. Until DEQ seeks and is granted authority to administer the Part 503 regulations by EPA, treatment works treating domestic sewage should continue to work directly with EPA to comply with them. For more information, you may call the EPA Region III office in Philadelphia at 215-814-5735.

Please note that if this permit is to be reissued in five years, there are specific testing requirements associated with the Form 2A reissuance application that are different from the testing requirements in your permit. In order to provide the necessary data for Form 2A you may need to begin additional sampling during the term of this permit prior to receiving a reissuance reminder letter from this agency. Please look at Form 2A Part D (Expanded Effluent Testing Data) and Part E (Toxicity Testing Data) for the sampling requirements. Please note that DEQ and EPA will no longer accept waiver requests from the sampling or testing requirements in the application forms.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty days from the date of service (the date you actually received this decision or the date it was mailed to you, whichever occurred first) within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Department of Environmental Quality. In the event that this decision is served on you by mail, three days are added to that period.

Alternately, any owner under §§ 62.1-44.16, 62.1-44.17, and 62.1-44.19 of the State Water Control Law aggrieved by any action of the State Water Control Board taken without a formal hearing, or by inaction of the Board, may demand in writing a formal hearing of such owner's grievance, provided a petition requesting such hearing is filed with the Board. Said petition must meet the requirements set forth in §1.23(b) of the Board's Procedural Rule No. 1. In cases involving actions of the Board, such petition must be filed within thirty days after notice of such action is mailed to such owner by certified mail.

A Reliability Class I is assigned to this facility and this facility has Class I licensed operator requirements.

Please contact Douglas Frasier at 703-583-3873 or via email at Douglas.Frasier@deq.virginia.gov should you have any questions about the permit.

Respectfully,



Bryant Thomas
Regional Water Permits & Planning Manager

Enc.: Monthly Log Sheet for Reclaimed Water Bacteria Monitoring
Permit for VA0092282
Fact Sheet for VA0092282

cc: DEQ-Water, OWPP
EPA-Region III, 3WP12
Department of Health, Culpeper
Water Compliance, NRO
Curtis Dalton, MDE via curt.dalton@mayland.gov

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY

[illegible]

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY**

Print name(s) of person(s) collecting samples: _____ _____	Print name(s) of person(s) or contract laboratory analyzing samples: _____ _____
Operator in responsible charge: Print or type name: _____ Signature: _____ Certificate No.: _____ Telephone No.: _____ Date: _____	



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Permit No. **VA0092282**
Effective Date: **June 1, 2015**
Expiration Date: **May 31, 2020**

AUTHORIZATION TO DISCHARGE UNDER THE
VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM AND THE VIRGINIA STATE
WATER CONTROL LAW AND TO PRODUCE OR DISTRIBUTE RECLAIMED WATER UNDER
THE WATER RECLAMATION AND REUSE REGULATION

In compliance with the provisions of the Clean Water Act as amended and pursuant to the State Water Control Law and regulations adopted pursuant thereto, the following owner is authorized to discharge in accordance with the information submitted with the permit application, and with this permit cover page, Part I – Effluent Limitations and Monitoring Requirements, Part II – Conditions Applicable To All VPDES Permits, Part III – Reclamation and Reuse Limitations and Monitoring Requirements and Part IV – Biosolids Limitations and Monitoring Requirements, as set forth herein.

Owner Name: Town of Leesburg
Facility Name: Leesburg Water Pollution Control Facility
County: Loudoun
Facility Location: 1391 East Market Street, Leesburg, VA 20176

The owner is authorized to discharge to the following receiving stream:

Stream Name: Potomac River
River Basin: Potomac River
River Subbasin: Potomac River
Section: Maryland Section 02 – Washington Metropolitan Area
Class: Maryland Designated II
Special Standards: Maryland Designated Use I-P

A handwritten signature in blue ink, appearing to read "Thomas A. Faha", written over a horizontal line.

Thomas A. Faha
Director, Northern Regional Office
Department of Environmental Quality

May 22, 2015
Date

A. Effluent Limitations and Monitoring Requirements**1. Outfall 001 – 7.5 MGD Facility**

- a. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- b. In addition to any Total Nitrogen or Total Phosphorus concentration limits (or monitoring requirements without associated limits) listed below, this facility has Total Nitrogen and Total Phosphorus calendar year load limits associated with this outfall included in the current Registration List under registration number VAN010061, enforceable under the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Dischargers and Nutrient Trading in the Chesapeake Watershed in Virginia.
- c. During the period beginning with the permit's effective date and lasting until the expiration date or the issuance of the CTO for the 10 MGD facility, whichever occurs first, the permittee is authorized to discharge from Outfall Number 001. Such discharges shall be limited and monitored by the permittee as specified below.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average ⁽¹⁾		Weekly Average ⁽¹⁾		Frequency	Sample Type
Flow ⁽²⁾ (MGD)	NL		NA		Continuous	TIRE
pH	NA		NA		1/D	Grab
cBOD ₅	10 mg/L	280 kg/day	15 mg/L	420 kg/day	1/D	24H-C
Total Suspended Solids (TSS) ⁽³⁾	10 mg/L	280 kg/day	15 mg/L	420 kg/day	1/D	24H-C
Dissolved Oxygen (DO)	NA		NA		1/D	Grab
Total Kjeldahl Nitrogen (TKN)	3.0 mg/L	190 lb/day	4.5 mg/L	280 lb/day	1/D	24H-C
<i>E. coli</i> (Geometric Mean) ⁽⁴⁾	126 n/100 mL		NA		1/W	Grab
Total Residual Chlorine (after dechlorination)	0.010 mg/L		0.012 mg/L		4/D	Grab
NO ₂ + NO ₃ as Nitrogen	NL mg/L		NA		1/W	24H-C
Total Nitrogen ⁽⁵⁾	NL mg/L		NA		1/W	Calculated
Total Nitrogen – Year to Date ⁽⁶⁾	NL mg/L		NA		1/M	Calculated
Total Nitrogen – Calendar Year ⁽⁶⁾	8.0 mg/L		NA		1/Y	Calculated
Total Phosphorus	NL mg/L		NA		1/W	24H-C
Total Phosphorus – Year to Date ⁽⁶⁾	NL mg/L		NA		1/M	Calculated
Total Phosphorus – Calendar Year ⁽⁶⁾	2.0 mg/L		NA		1/Y	Calculated
Chronic Toxicity – <i>C. dubia</i> ⁽⁷⁾	NA		NA		1/Y	24H-C
Chronic Toxicity – <i>P. promelas</i> ⁽⁷⁾	NA		NA		1/Y	24H-C

⁽¹⁾ See Part I.B.

MGD = Million gallons per day.

4/D = Four times every day.

⁽²⁾ The design flow is 7.5 MGD.

NA = Not applicable.

1/D = Once every day.

⁽³⁾ TSS shall be expressed as two significant figures.

NL = No limit; monitor and report.

1/W = Once every week.

⁽⁴⁾ Samples shall be collected between 10 A.M. and 4 P.M.

S.U. = Standard units.

1/M = Once every month.

⁽⁵⁾ Total Nitrogen is the sum of Total Kjeldahl Nitrogen and NO₂+NO₃ Nitrogen and shall be calculated from the results of those tests.

TIRE = Totalizing, indicating and recording equipment.

1/Y = Once every calendar year.

⁽⁶⁾ See Part I.B.3. for nutrient reporting calculations.⁽⁷⁾ See Part I.D. for whole effluent toxicity monitoring requirements.

24H-C = A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the monitored 24-hour period. Where discrete sampling is employed, the permittee shall collect a minimum of twenty-four (24) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum of twenty-four (24) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by 10% or more during the monitored discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

2. Outfall 001 – 10 MGD Facility

- a. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- b. In addition to any Total Nitrogen or Total Phosphorus concentration limits (or monitoring requirements without associated limits) listed below, this facility has Total Nitrogen and Total Phosphorus calendar year load limits associated with this outfall included in the current Registration List under registration number VAN010061, enforceable under the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Dischargers and Nutrient Trading in the Chesapeake Watershed in Virginia.
- c. During the period beginning with the issuance of the CTO for the 10 MGD facility and lasting until the permit's expiration date, the permittee is authorized to discharge from Outfall Number 001. Such discharges shall be limited and monitored by the permittee as specified below.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average ⁽¹⁾		Weekly Average ⁽¹⁾		Frequency	Sample Type
Flow ⁽²⁾ (MGD)	NL		NA		Continuous	TIRE
pH	NA		NA		1/D	Grab
cBOD ₅	10 mg/L	380 kg/day	15 mg/L	570 kg/day	1/D	24H-C
Total Suspended Solids (TSS) ⁽³⁾	10 mg/L	380 kg/day	15 mg/L	570 kg/day	1/D	24H-C
Dissolved Oxygen (DO)	NA		NA		1/D	Grab
Total Kjeldahl Nitrogen (TKN)	3.0 mg/L	250 lb/day	4.5 mg/L	380 lb/day	1/D	24H-C
<i>E. coli</i> (Geometric Mean) ⁽⁴⁾	126 n/100 mL		NA		1/W	Grab
Total Residual Chlorine (after dechlorination)	0.010 mg/L		0.011 mg/L		4/D	Grab
NO ₂ + NO ₃ as Nitrogen	NL mg/L		NA		1/W	24H-C
Total Nitrogen ⁽⁵⁾	NL mg/L		NA		1/W	Calculated
Total Nitrogen – Year to Date ⁽⁶⁾	NL mg/L		NA		1/M	Calculated
Total Nitrogen – Calendar Year ⁽⁶⁾⁽⁷⁾	4.0 mg/L		NA		1/Y	Calculated
Total Phosphorus	NL mg/L		NA		1/W	24H-C
Total Phosphorus – Year to Date ⁽⁶⁾	NL mg/L		NA		1/M	Calculated
Total Phosphorus – Calendar Year ⁽⁶⁾⁽⁷⁾	0.3 mg/L		NA		1/Y	Calculated
Acute Toxicity – <i>C. dubia</i> ⁽⁸⁾	NA		NA		1/Q	24H-C
Acute Toxicity – <i>P. promelas</i> ⁽⁸⁾	NA		NA		1/Q	24H-C
Chronic Toxicity – <i>C. dubia</i> (TU _c) ⁽⁸⁾	NA		NA		1/Q	24H-C
Chronic Toxicity – <i>P. promelas</i> (TU _c) ⁽⁸⁾	NA		NA		1/Q	24H-C

⁽¹⁾ See Part I.B.

MGD = Million gallons per day.

4/D = Four times every day.

⁽²⁾ The design flow is 10 MGD.

NA = Not applicable.

1/D = Once every day.

⁽³⁾ TSS shall be expressed as two significant figures.

NL = No limit; monitor and report.

1/W = Once every week.

⁽⁴⁾ Samples shall be collected between 10 A.M. and 4 P.M.

S.U. = Standard units.

1/M = Once every month.

⁽⁵⁾ Total Nitrogen is the sum of Total Kjeldahl Nitrogen and NO₂+NO₃ Nitrogen and shall be calculated from the results of those tests.

TIRE = Totalizing, indicating and recording equipment.

1/Q = Once every calendar quarter.*

1/Y = Once every calendar year.

⁽⁶⁾ See Part I.B.3. for nutrient reporting calculations.⁽⁷⁾ The calendar year annual averages for Total Nitrogen and Total Phosphorus are effective January 1st of the year after issuance of the CTO for the expanded facility.⁽⁸⁾ See Part I.D. for whole effluent toxicity monitoring requirements.

24H-C = A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the monitored 24-hour period.

Where discrete sampling is employed, the permittee shall collect a minimum of twenty-four (24) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum of twenty-four (24) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by 10% or more during the monitored discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

*The quarterly monitoring periods shall be January through March, April through June, July through September, and October through December.

The DMR shall be submitted no later than the 10th day of the month following the monitoring period.

B. Quantification Levels and Compliance Reporting

1. Quantification Levels

- a. The quantification levels (QL) shall be less than or equal to the following concentrations:

<u>Characteristic</u>	<u>Quantification Level</u>
Total Suspended Solids (TSS)	1.0 mg/L
carbonaceous-Biochemical Oxygen Demand-5 day (cBOD ₅)	2 mg/L
Total Residual Chlorine (TRC)	0.10 mg/L

- b. The QL is defined as the lowest concentration used to calibrate a measurement system in accordance with the procedures published for the method. The permittee shall use any method in accordance with Part II A of this permit.
- c. It is the responsibility of the permittee to ensure that proper quality assurance/quality control (QA/QC) protocols are followed during the sampling and analytical procedures. QA/QC information shall be documented to confirm that appropriate analytical procedures have been used and the required QLs have been attained.

2. Compliance Reporting for parameters in Part I.A.

- a. **Monthly Average** – Compliance with the monthly average limitations and/or reporting requirements for the parameters listed in Part I.B.1.a of this permit condition shall be determined as follows: All concentration data below the QL used for the analysis (QL must be less than or equal to the QL listed in Part I.B.1.a above) shall be treated as zero. All concentration data equal to or above the QL used for the analysis shall be treated as it is reported. An arithmetic average shall be calculated using all reported data for the month, including the defined zeros. This arithmetic average shall be reported on the Discharge Monitoring Report (DMR) as calculated. If all data are below the QL used for the analysis, then the average shall be reported as "< QL". If reporting for quantity is required on the DMR and the reported monthly average concentration is < QL, then report "< QL" for the quantity. Otherwise use the reported concentration data (including the defined zeros) and flow data for each sample day to determine the daily quantity and report the monthly average of the calculated daily quantities.
- b. **Maximum Weekly Average** – Compliance with the weekly average limitations and/or reporting requirements for the parameters listed in Part I.B.1.a of this permit condition shall be determined as follows: All concentration data below the QL used for the analysis (QL must be less than or equal to the QL listed in Part I.B.1.a above) shall be treated as zero. All concentration data equal to or above the QL used for the analysis shall be treated as reported. An arithmetic average shall be calculated using all reported data, including the defined zeros, collected within each complete calendar week and entirely contained within the reporting month. The maximum value of the weekly averages thus determined shall be reported on the DMR. If all data are below the QL used for the analysis, then the weekly average shall be reported as "< QL". If reporting for quantity is required on the DMR and the reported weekly average concentration is < QL, then report "< QL" for the quantity. Otherwise use the reported concentration data (including the defined zeros) and flow data for each sample day to determine the daily quantity and report the maximum weekly average of the calculated daily quantities.
- c. **Single Datum** – Any single datum required shall be reported as "< QL" if it is less than the QL used in the analysis (QL must be less than or equal to the QL listed in Part I.B.1.a above). Otherwise the numerical value shall be reported.
- d. **Significant Digits** – The permittee shall report at least the same number of significant digits as the permit limit for a given parameter. Regardless of the rounding convention used (i.e., 5 always rounding up or to the nearest even number) by the permittee, the permittee shall use the convention consistently and shall ensure that consulting laboratories employed by the permittee use the same convention.

3. Nutrient Reporting Calculations for Part I. A.

- a. For each calendar month, the DMR shall show the calendar year-to-date average concentration (mg/L) calculated in accordance with the following formulae:

$$MC_{avg} - YTD = (\sum_{(Jan-current\ month)} MC_{avg}) \div (\# \text{ of months})$$

where:

$MC_{avg} - YTD$ = calendar year-to-date average concentration (mg/L)

MC_{avg} = monthly average concentration (mg/L) as reported on DMR

- b. The total nitrogen and phosphorus average concentrations (mg/L) for each calendar year (AC) shall be shown on the December DMR due January 10th of the following year. These values shall be calculated in accordance with the following formulae:

$$AC_{avg} = (\sum_{(Jan-Dec)} MC_{avg}) \div 12$$

where:

AC_{avg} = calendar year average concentration (mg/L)

MC_{avg} = monthly average concentration (mg/L) as reported on DMR

- c. For total phosphorus (TP), all daily concentration data below the quantification level (QL) for the analytical method used should be treated as half the QL. All daily concentration data equal to or above the QL for the analytical method used shall be treated as it is reported.
- d. For total nitrogen (TN), if none of the daily concentration data for the respective species (i.e., nitrates/nitrites, TKN) are equal to or above the QL for the respective analytical methods used, the daily TN concentration value reported shall equal one half of the largest QL used for the respective species. If one of the data is equal to or above the QL, the daily TN concentration value shall be treated as that data point is reported. If more than one of the data is above the QL, the daily TN concentration value shall equal the sum of the data points as reported.

C. Pretreatment Requirements

- On or before 1 November 2015, the permittee shall submit to the DEQ – Northern Regional Office (DEQ-NRO) a survey of all industrial users (IUs) discharging to the POTW. The information shall be submitted on the DEQ Discharger Survey Short Form or an equivalent form encompassing all information about the quality and quantity of the IU wastewater. Survey results shall identify significant industrial users discharging to the POTW.
- If categorical industrial user(s) (CIUs) are identified or if the permittee or DEQ determines that the IUs(s) have potential to adversely affect the operation of the POTW or cause violation(s) of federal, state, or local standards or requirements; the permittee shall develop and submit a pretreatment program for approval to the DEQ-NRO, within one year of written notification by DEQ. The program shall enable the POTW to control by permit the significant industrial users (SIU) discharging wastewater to the treatment works.

A SIU is defined as an IU that:

- Has a process wastewater, excluding sanitary, non-contact cooling water and boiler blowdown flow of 25,000 gallons or more per average workday;
- Contributes a process waste stream which makes up 5% or more of the average dry weather hydraulic or organic capacity of the POTW;
- Is subject to the categorical pretreatment standards; or
- Has significant impact, either singularly or in combination with other significant dischargers, on the treatment works or the quality of its effluent.

3. Should evaluation by the DEQ of results of the industrial user survey conducted in accordance with (1) above indicate that the permittee is not required to implement a pretreatment program, the requirements for program development described in (4) below may be suspended by the DEQ.
4. The approvable pretreatment program submission shall at a minimum contain the following parts:
 - a. Legal authority;
 - b. Program procedures;
 - c. Funding and resources;
 - d. Local limits evaluation and local limits if needed;
 - e. Enforcement response plan; and
 - f. List of significant industrial users.
5. Where the permittee is required to develop a pretreatment program, they shall submit to DEQ-NRO an annual report that describes the permittee's program activities over the previous year. The annual report shall be submitted no later than January 31st of each year and shall include:
 - a. An updated list of the (SIUs) showing the categorical standards and local limits applicable to each.
 - b. A summary of the compliance status of each SIUs with pretreatment standards and permit requirements.
 - c. A summary of the number and types of SIUs sampling and inspections performed by the POTW.
 - d. All information concerning any interference, upset, VPDES permit or Water Quality Standards violations directly attributable to SIUs and enforcement actions taken to alleviate said events.
 - e. A description of all enforcement actions taken against SIUs over the previous 12 months.
 - f. A summary of any changes to the submitted pretreatment program that has not been previously reported to DEQ-NRO.
 - g. A summary of the permits issued to SIUs since the last annual report.
 - h. POTW and self-monitoring results for significant industrial users determined to be in significant non-compliance during the reporting period.
 - i. Results of the POTW's influent/effluent/sludge sampling, not previously submitted to DEQ.
 - j. Copies of newspaper publications of all SIUs in significant non-compliance during the reporting period. This is due no later than March 31st of each year.
 - k. Signature of an authorized representative.
6. The DEQ may require the POTW to institute changes to the legal authority regarding SIU permit(s):
 - a. If the legal authority does not meet the requirements of the Clean Water Act, Water Control Law or State regulations;
 - b. If problems such as interferences, pass-through, violations of water quality standards or sludge contamination develop or continue; and
 - c. If federal, state or local requirements change.

D. Whole Effluent Toxicity Program Requirements**1. Biological Monitoring for the 7.5 MGD Facility**

- a. In accordance with the schedule in Part I.D.2. below, the permittee shall conduct annual chronic toxicity tests during this permit term or until the issuance of the Certificate to Operate (CTO) for the 10 MGD facility, whichever occurs first. The permittee shall collect 24-hour flow-proportioned composite samples of final effluent from Outfall 001.

The chronic tests to use are:

Chronic 3-Brood Static Renewal Survival and Reproduction Test using *Ceriodaphnia dubia*

Chronic 7-Day Static Renewal Survival and Growth Test using *Pimephales promelas*

These chronic tests shall be conducted in such a manner and at sufficient dilutions (minimum of five dilutions) to determine the "No Observed Effect Concentration" (NOEC) for survival and reproduction or growth. Results which cannot be quantified (i.e., a "less than" NOEC value) are not acceptable and a retest shall be performed. The NOEC, as determined by hypothesis testing, shall be converted to TU_c (Chronic Toxic Units) for Discharge Monitoring Report (DMR) reporting where $TU_c = 100/NOEC$. Report the LC_{50} at 48 hours and the IC_{25} with the NOEC's in the test report.

- b. The permittee may provide additional samples to address data variability. These data shall be reported. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.

- c. The test dilutions shall be able to determine compliance with the following endpoints:

Chronic NOEC $\geq 28\%$; equivalent to a $TU_c \leq 3.57$

- d. The test data will be evaluated statistically for reasonable potential at the conclusion of the test period. The data may be evaluated sooner if requested by the permittee or if toxicity has been noted. Should evaluation of the data indicate that a limit is warranted, a WET limit and compliance schedule will be required.
- e. The permit may be modified or revoked and reissued to include pollutant specific limits in lieu of a WET limit should it be demonstrated that toxicity is due to specific parameters. The pollutant specific limitation shall control the toxicity of the effluent.
- f. Should the permittee conduct toxicity testing of the effluent prior to the compliance date listed in the schedule in Part I.D.2. below, the results of the test and the test report shall be reported with the DMR for the month following the receipt of the testing results. In no case shall this exceed 45 days from the receipt of the test results or the report submission dates below, whichever may occur first.

2. Reporting Schedule

The permittee shall monitor during the specified period; shall report the results on the DMR; and shall supply one copy of the toxicity test report specified in this Whole Effluent Toxicity Program in accordance with the following schedule:

Period	Sampling Period	DMR/Report Submission Dates
Annual 1	1 January 2016 – 31 December 2016	10 January 2017
Annual 2	1 January 2017 – 31 December 2017	10 January 2018
Annual 3	1 January 2018 – 31 December 2018	10 January 2019
Annual 4	1 January 2019 – 31 December 2019	10 January 2020

3. Biological Monitoring for the 10 MGD Facility

- a. Commencing within six (6) months of the effective date of the CTO issuance for the 10 MGD facility, the permittee shall conduct quarterly acute and chronic toxicity tests using 24-hour flow-proportioned composite samples of final effluent from Outfall 001.

The acute tests to use are:

48 Hour Static Acute test using *Ceriodaphnia dubia*

48 Hour Static Acute test using *Pimephales promelas*

The acute tests shall be conducted using five (5) geometric dilutions of effluent with a minimum of four (4) replicates, with five (5) organisms in each. The "No Observed Adverse Effect Concentration" (NOAEC), as determined by hypothesis testing shall be reported on the Discharge Monitoring Report (DMR). The LC_{50} shall also be determined and noted on the submitted test report. Tests in which control survival is less than 90% are not acceptable.

The chronic tests to use are:

Chronic 3-Brood Static Renewal Survival and Reproduction Test using *Ceriodaphnia dubia*

Chronic 7-Day Static Renewal Survival and Growth Test using *Pimephales promelas*

These chronic tests shall be conducted in such a manner and at sufficient dilutions (minimum of five dilutions) to determine the "No Observed Effect Concentration" (NOEC) for survival and reproduction or growth. Results which cannot be quantified (i.e., a "less than" NOEC value) are not acceptable and a retest shall be performed. The NOEC, as determined by hypothesis testing, shall be converted to TU_c (Chronic Toxic Units) for DMR reporting where $TU_c = 100/NOEC$. Report the LC_{50} at 48 hours and the IC_{25} with the NOEC's in the test report.

- b. The permittee may provide additional samples to address data variability. These data shall be reported. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.
- c. The test dilutions shall be able to determine compliance with the following endpoints:

Acute NOAEC = 100%

Chronic NOEC $\geq 28\%$; equivalent to a $TU_c \leq 3.57$

- d. The test data will be evaluated statistically for reasonable potential at the conclusion of the test period. The data may be evaluated sooner if requested by the permittee or if toxicity has been noted. Should evaluation of the data indicate that a limit is warranted, a WET limit and compliance schedule will be required.
- e. The permit may be modified or revoked and reissued to include pollutant specific limits in lieu of a WET limit should it be demonstrated that toxicity is due to specific parameters. The pollutant specific limitation shall control the toxicity of the effluent.
- f. After four (4) quarterly testing regimes are completed and the data are evaluated by DEQ, indicating no reasonable potential exists for toxicity; the permittee may request that the monitoring frequency for chronic WET testing be reduced to once a year and the acute toxicity testing requirement be removed.

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E. Other Requirements and Special Conditions**1. 95% Capacity Reopener**

A written notice and a plan of action for ensuring continued compliance with the terms of this permit shall be submitted to the DEQ-Northern Regional Office (DEQ-NRO) when the monthly average flow influent to the sewage treatment plant reaches 95% of the design capacity authorized in this permit for each month of any three consecutive month period. The written notice shall be submitted within 30 days and the plan of action shall be received at the DEQ-NRO no later than 90 days from the third consecutive month for which the flow reached 95% of the design capacity. The plan shall include the necessary steps and a prompt schedule of implementation for controlling any current or reasonably anticipated problem resulting from high influent flows. Failure to submit an adequate plan in a timely manner shall be deemed a violation of this permit.

2. Indirect Dischargers

The permittee shall provide adequate notice to the Department of the following:

- a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Section 301 or 306 of Clean Water Act and the State Water Control Law if it were directly discharging those pollutants; and
- b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of this permit.
- c. Adequate notice shall include information on (i) the quality and quantity of effluent introduced into the treatment works, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the treatment works.

3. Operation and Maintenance (O&M) Manual Requirement

The permittee shall maintain a current Operations and Maintenance (O&M) Manual for the treatment works that is in accordance with Virginia Pollutant Discharge Elimination System Regulations, 9VAC25-31 and Sewage Collection and Treatment Regulations, 9VAC25-790.

The O&M Manual and subsequent revisions shall include the manual effective date and meet Part II.K.2 and Part II.K.4 Signatory Requirements of the permit. Any changes in the practices and procedures followed by the permittee shall be documented in the O&M Manual within 90 days of the effective date of the changes. The permittee shall operate the treatment works in accordance with the O&M Manual and shall make the O&M manual available to Department personnel for review during facility inspections. Within 30 days of a request by DEQ, the current O&M Manual shall be submitted to the DEQ-NRO for review and approval.

The O&M Manual shall detail the practices and procedures which will be followed to ensure compliance with the requirements of this permit. This manual shall include, but not necessarily be limited to, the following items, as appropriate:

- a. Permitted outfall locations and techniques to be employed in the collection, preservation, and analysis of effluent, storm water and sludge samples;
- b. Procedures for measuring and recording the duration and volume of treated wastewater discharged;
- c. Discussion of Best Management Practices, if applicable;
- d. Procedures for handling, storing and disposing of all wastes, fluids and pollutants that will prevent these materials from reaching state waters. List type and quantity of wastes, fluids and pollutants (e.g. chemicals) stored at this facility;
- e. Discussion of treatment works design, treatment works operation, routine preventative maintenance of units within the treatment works, critical spare parts inventory and record keeping;

- f. Plan for the management and/or disposal of waste solids and residues;
- g. Hours of operation and staffing requirements for the plant to ensure effective operation of the treatment works and maintain permit compliance;
- h. List of facility, local and state emergency contacts; and
- i. Procedures for reporting and responding to any spills/overflows/ treatment works upsets.

4. CTC and CTO Requirement

In accordance with *Sewage Collection and Treatment* regulation (9VAC25-790), the permittee shall obtain a Certificate to Construct (CTC) and a Certificate to Operate (CTO) from the Department of Environmental Quality prior to constructing wastewater treatment works and operating the treatment works, respectively. Non-compliance with the CTC or CTO shall be deemed a violation of the permit.

5. Licensed Operator Requirement

The permittee shall employ or contract at least one Class I licensed wastewater works operator for this facility. The license shall be issued in accordance with Title 54.1 of the Code of Virginia and the regulations of the Board for Waterworks and Wastewater Works Operators. The permittee shall notify the Department in writing whenever he is not complying, or has grounds for anticipating he will not comply with this requirement. The notification shall include a statement of reasons and a prompt schedule for achieving compliance.

6. Reliability Class

The permitted treatment works shall meet Reliability Class I.

7. E3/E4

The annual average concentration limitations for Total Nitrogen and/or Total Phosphorus are suspended during any calendar year in which the facility is considered by DEQ to be a participant in the Virginia Environmental Excellence Program in good standing at either the Exemplary Environmental Enterprise (E3) level or the Extraordinary Environmental Enterprise (E4) level, provided that the following conditions have also been met:

- a. The facility has applied for (or renewed) participation, been accepted, maintained a record of sustained compliance and submitted an annual report according to the program guidelines;
- b. The facility has demonstrated that they have in place a fully implemented environmental management system (EMS) with an alternative compliance method that includes operation of installed nutrient removal technologies to achieve the annual average concentration limitations; and
- c. The E3/E4 designation from DEQ and implementation of the EMS has been in effect for the full calendar year.

The annual average concentration limitations for Total Nitrogen and/or Total Phosphorus, as applicable, are not suspended in any calendar year following a year in which the facility failed to achieve the annual average concentration limitations as required by b. above.

8. Nutrient Reopener

This permit may be modified or, alternatively, revoked and reissued:

- a. If any approved wasteload allocation procedure, pursuant to Section 303(d) of the Clean Water Act, imposes wasteload allocations, limits or conditions on the facility that are not consistent with the permit requirements;
- b. To incorporate technology-based effluent concentration limitations for nutrients in conjunction with the installation of nutrient control technology, whether by new construction, expansion or upgrade, or

- c. To incorporate alternative nutrient limitations and/or monitoring requirements, should:
 - i. the State Water Control Board adopt new nutrient standards for the water body receiving the discharge, including the Chesapeake Bay or its tributaries, or
 - ii. a future water quality regulation or statute require new or alternative nutrient control.

9. Unusual or Extraordinary Discharge Notification

The permittee shall notify the Fairfax County Water Authority at 703-698-5600 (703-698-5613 after hours); the Maryland Department of the Environment at 410-537-3510 (866-633-4686 after hours); and the Interstate Commission on the Potomac River Basin at 301-984-1908 within six (6) hours upon discovery of an unusual or extraordinary discharge. This notification shall include all necessary information as required under Part II.H of this permit.

10. PCB Pollutant Minimization Plan

The permittee has completed low-detection level, congener specific monitoring of the effluent for PCBs.

a. Pollutant Minimization Plan (PMP)

Upon notification from DEQ-NRO that the PCB monitoring results for the effluent indicate a reasonable potential to exceed the water quality criterion or an actual exceedance of the Wasteload Allocation specified in the PCB TMDL for the Tidal Portions of the Potomac and Anacostia Rivers in the District of Columbia, Maryland and Virginia (approved 31 October 2007 by EPA), the permittee shall submit to DEQ-NRO for review and approval a Pollutant Minimization Plan (PMP) designed to investigate the location and potential reduction of sources of PCBs in the collection system. The PMP shall be submitted within 180 days of the date of the notification letter.

The PMP shall detail the practices and procedures which will be followed to investigate the location and potential reduction of sources of PCBs. This PMP shall include, but not necessarily be limited to, the following items, as appropriate:

- 1) Provide a facility contact for the contents of the PMP and any activities associated with the PMP;
- 2) Provide a proposed implementation schedule for minimization activities and prospective milestones;
- 3) Propose actions for known or probable sources;
- 4) Propose actions to find and control unknown sources;
- 5) Summarize any previous minimization activities;
- 6) Present methods for measuring, demonstrating and reporting progress;
 - i) May include an evaluation of the total PCBs and/or PCB congener distribution in the initial source intake water to determine the net contributions of PCBs introduced to the treatment works.
 - ii) May include raw influent testing using either grab or composite samples as well as sampling upstream in the collection system. Screening methods may be utilized to target specific areas of interest.
 - iii) Alternative PCB test methods are acceptable provided analytical sensitivity is sufficient for detection and quantification.
 - iv) May perform further monitoring of the final effluent to determine effectiveness of the reduction efforts and to reestablish a new baseline for PCBs in the final effluent.
- 7) Estimate the PCB load reduction provided by treatment; and

- 8) Provide information on continuing assessment of progress, which may include establishment of criteria to evaluate whether the location and potential reduction of PCB sources has been addressed, and whether a more routine follow-up awareness, education, and inspection approach is appropriate.

b. Pollutant Minimization Plan (PMP) Annual Report

If the permittee is required to implement a PMP in accordance with this special condition, an Annual Report shall be submitted to DEQ-NRO for review and approval by February 10th for the previous year's PMP activities.

The Annual Report shall:

- 1) Summarize PMP Achievement for investigating the location and potential reduction of sources of PCBs in the collection system during the past calendar year;
- 2) Address any revisions needed for the PMP for the coming year;
- 3) Address material and process modifications, if applicable;
- 4) Summarize measures taken to address known, probable and potential sources; and
- 5) Discuss incremental and cumulative changes from the baseline loading.

11. Total Maximum Daily Load (TMDL) Reopener

This permit shall be modified or alternatively revoked and reissued if any approved wasteload allocation procedure, pursuant to Section 303(d) of the Clean Water Act, imposes wasteload allocations, limits or conditions on the facility that are not consistent with the permit requirements.

CONDITIONS APPLICABLE TO ALL VPDES PERMITS

A. Monitoring

1. Samples and measurements required by this permit shall be taken at the permit designated or approved location and be representative of the monitored activity.
 - a. Monitoring shall be conducted according to procedures approved under Title 40 Code of Federal Regulations Part 136 or alternative methods approved by the U.S. Environmental Protection Agency, unless other procedures have been specified in this permit.
 - b. The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals that will insure accuracy of measurements.
 - c. Samples taken shall be analyzed in accordance with 1VAC30-45, Certification for Noncommercial Environmental Laboratories, or 1VAC30-46, Accreditation for Commercial Environmental Laboratories.
2. Any pollutant specifically addressed by this permit that is sampled or measured at the permit designated or approved location more frequently than required by this permit shall meet the requirements in A 1 a through c above and the results of this monitoring shall be included in the calculations and reporting required by this permit.
3. Operational or process control samples or measurements shall not be taken at the designated permit sampling or measurement locations. Operational or process control samples or measurements do not need to follow procedures approved under Title 40 Code of Federal Regulations Part 136 or be analyzed in accordance with 1VAC30-45, Certification for Noncommercial Environmental Laboratories, or 1VAC30-46, Accreditation for Commercial Environmental Laboratories.

B. Records

1. Records of monitoring information shall include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sampling or measurements;
 - c. The date(s) and time(s) analyses were performed;
 - d. The individual(s) who performed the analyses;
 - e. The analytical techniques or methods used; and
 - f. The results of such analyses.
2. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee, or as requested by the Board.

C. Reporting Monitoring Results

1. The permittee shall submit the results of the monitoring required by this permit not later than the 10th day of the month after monitoring takes place, unless another reporting schedule is specified elsewhere in this permit.

Monitoring results shall be submitted to:

Department of Environmental Quality – Northern Regional Office (DEQ-NRO)
13901 Crown Court
Woodbridge, VA 22193

2. Monitoring results shall be reported on a Discharge Monitoring Report (DMR) or on forms provided, approved or specified by the Department.
3. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.

D. Duty to Provide Information

The permittee shall furnish to the Department, within a reasonable time, any information which the Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Board may require the permittee to furnish, upon request, such plans, specifications, and other pertinent information as may be necessary to determine the effect of the wastes from this discharge on the quality of state waters, or such other information as may be necessary to accomplish the purposes of the State Water Control Law. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

E. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

F. Unauthorized Discharges

Except in compliance with this permit, or another permit issued by the Board, it shall be unlawful for any person to:

1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances; or
2. Otherwise alter the physical, chemical or biological properties of such state waters and make them detrimental to the public health, or to animal or aquatic life, or to the use of such waters for domestic or industrial consumption, or for recreation, or for other uses.

G. Reports of Unauthorized Discharges

Any permittee who discharges or causes or allows a discharge of sewage, industrial waste, other wastes or any noxious or deleterious substance into or upon state waters in violation of Part II.F.; or who discharges or causes or allows a discharge that may reasonably be expected to enter state waters in violation of Part II.F., shall notify the Department of the discharge immediately upon discovery of the discharge, but in no case later than 24 hours after said discovery. A written report of the unauthorized discharge shall be submitted to the Department, within five days of discovery of the discharge. The written report shall contain:

1. A description of the nature and location of the discharge;
2. The cause of the discharge;
3. The date on which the discharge occurred;
4. The length of time that the discharge continued;
5. The volume of the discharge;
6. If the discharge is continuing, how long it is expected to continue;
7. If the discharge is continuing, what the expected total volume of the discharge will be; and

8. Any steps planned or taken to reduce, eliminate and prevent a recurrence of the present discharge or any future discharges not authorized by this permit.

Discharges reportable to the Department under the immediate reporting requirements of other regulations are exempted from this requirement.

H. Reports of Unusual or Extraordinary Discharges

If any unusual or extraordinary discharge including a bypass or upset should occur from a treatment works and the discharge enters or could be expected to enter state waters, the permittee shall promptly notify, in no case later than 24 hours, the Department by telephone after the discovery of the discharge. This notification shall provide all available details of the incident, including any adverse affects on aquatic life and the known number of fish killed. The permittee shall reduce the report to writing and shall submit it to the Department within five days of discovery of the discharge in accordance with Part II.I.2. Unusual and extraordinary discharges include but are not limited to any discharge resulting from:

1. Unusual spillage of materials resulting directly or indirectly from processing operations;
2. Breakdown of processing or accessory equipment;
3. Failure or taking out of service some or all of the treatment works; and
4. Flooding or other acts of nature.

I. Reports of Noncompliance

The permittee shall report any noncompliance which may adversely affect state waters or may endanger public health.

1. An oral report shall be provided within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which shall be reported within 24 hours under this paragraph:
 - a. Any unanticipated bypass; and
 - b. Any upset which causes a discharge to surface waters.
2. A written report shall be submitted within 5 days and shall contain:
 - a. A description of the noncompliance and its cause;
 - b. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
 - c. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The Board may waive the written report on a case-by-case basis for reports of noncompliance under Part II.I. if the oral report has been received within 24 hours and no adverse impact on state waters has been reported.

3. The permittee shall report all instances of noncompliance not reported under Parts II, I.1. or I.2., in writing, at the time the next monitoring reports are submitted. The reports shall contain the information listed in Part II.I.2.

NOTE: The immediate (within 24 hours) reports required in Parts II, G., H. and I. may be made to the Department's Northern Regional Office at (703) 583-3800 (voice) or (703) 583-3821 (fax) or online at <http://www.deq.virginia.gov/Programs/PollutionResponsePreparedness/MakingaReport.aspx>.

For reports outside normal working hours, leave a message and this shall fulfill the immediate reporting requirement. For emergencies, the Virginia Department of Emergency Services maintains a 24-hour telephone service at 1-800-468-8892.

J. Notice of Planned Changes

1. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
 - a. The permittee plans alteration or addition to any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:
 - 1) After promulgation of standards of performance under Section 306 of Clean Water Act which are applicable to such source; or
 - 2) After proposal of standards of performance in accordance with Section 306 of Clean Water Act which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal;
 - b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations nor to notification requirements specified elsewhere in this permit; or
 - c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
2. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

K. Signatory Requirements

1. Applications. All permit applications shall be signed as follows:
 - a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - 1) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or
 - 2) The manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
 - c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a public agency includes:
 - 1) The chief executive officer of the agency, or
 - 2) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

2. Reports, etc. All reports required by permits, and other information requested by the Board shall be signed by a person described in Part II.K.1., or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in Part II.K.1.;
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
 - c. The written authorization is submitted to the Department.
3. Changes to authorization. If an authorization under Part II.K.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part II.K.2. shall be submitted to the Department prior to or together with any reports, or information to be signed by an authorized representative.
4. Certification. Any person signing a document under Parts II, K.1. or K.2. shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

L. Duty to Comply

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the State Water Control Law and the Clean Water Act, except that noncompliance with certain provisions of this permit may constitute a violation of the State Water Control Law but not the Clean Water Act. Permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if this permit has not yet been modified to incorporate the requirement.

M. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit. All permittees with a currently effective permit shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Board. The Board shall not grant permission for applications to be submitted later than the expiration date of the existing permit.

N. Effect of a Permit

This permit does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorize any injury to private property or invasion of personal rights, or any infringement of federal, state or local law or regulations.

O. State Law

Nothing in this permit shall be construed to preclude the institution of any legal action under, or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any other state law or regulation or under authority preserved by Section 510 of the Clean Water Act. Except as provided in permit conditions on "bypassing" (Part II.U.), and "upset" (Part II.V.) nothing in this permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

P. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Sections 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law.

Q. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes effective plant performance, adequate funding, adequate staffing, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

R. Disposal of Solids or Sludges

Solids, sludges or other pollutants removed in the course of treatment or management of pollutants shall be disposed of in a manner so as to prevent any pollutant from such materials from entering state waters.

S. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

T. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

U. Bypass

1. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts II, U.2. and U.3.
2. Notice
 - a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, prior notice shall be submitted, if possible at least ten days before the date of the bypass.
 - b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Part II.I.
3. Prohibition of bypass.
 - a. Bypass is prohibited, and the Board may take enforcement action against a permittee for bypass, unless:
 - 1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

- 2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - 3) The permittee submitted notices as required under Part II.U.2.
- b. The Board may approve an anticipated bypass, after considering its adverse effects, if the Board determines that it will meet the three conditions listed above in Part II.U.3.a.

V. Upset

1. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of Part II.V.2. are met. A determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is not a final administrative action subject to judicial review.
2. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - b. The permitted facility was at the time being properly operated;
 - c. The permittee submitted notice of the upset as required in Part II.I.; and
 - d. The permittee complied with any remedial measures required under Part II.S.
3. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

W. Inspection and Entry

The permittee shall allow the Director, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act and the State Water Control Law, any substances or parameters at any location.

For purposes of this section, the time for inspection shall be deemed reasonable during regular business hours, and whenever the facility is discharging. Nothing contained herein shall make an inspection unreasonable during an emergency.

X. Permit Actions

Permits may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Y. Transfer of permits

1. Permits are not transferable to any person except after notice to the Department. Except as provided in Part II.Y.2., a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued, or a minor modification made, to identify the new permittee and incorporate such other requirements as may be necessary under the State Water Control Law and the Clean Water Act.
2. As an alternative to transfers under Part II.Y.1., this permit may be automatically transferred to a new permittee if:
 - a. The current permittee notifies the Department at least 30 days in advance of the proposed transfer of the title to the facility or property;
 - b. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and
 - c. The Board does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Part II.Y.2.b.

Z. Severability

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

RECLAMATION AND REUSE CONDITIONS AND REQUIREMENTS

A. Standards and Monitoring Requirements

Level 2 Reclaimed Water (Outfall 676)

During the period beginning with the issuance of a Certificate to Operate (CTO) for the reclamation system producing Level 2 reclaimed water and ending with the permit expiration date, the permittee is required to monitor pollutants as described below for reuses specified in the Reclaimed Water Management Plan:

Parameter	Standard ⁽¹⁾	Units	Frequency	Sample Type
<i>E. coli</i> ⁽²⁾	Monthly Geometric mean ⁽³⁾ : ≤ 126	Colonies/100 mL	1/W ⁽⁴⁾	Grab
	CAT: > 235			
Total Residual Chlorine (TRC) ⁽⁵⁾	NL	mg/L	1/2 Hrs	Grab
	CAT: < 1.0	mg/L	Resample within 1 hour of reaching CAT	
pH ⁽⁶⁾	6.0 – 9.0	Standard Units	1/D	Grab
cBOD ₅	Monthly average: ≤ 25	mg/L	1/D	24-HC
	Maximum weekly average: ≤ 40			
Total Suspended Solids (TSS)	Daily average: ≤ 30	mg/L	1/D	24-HC
	Maximum weekly average: ≤ 45			
Reclamation System Flow ^{(7) (8)}	Monthly average: NL	MGD	Continuous	TIRE
	Monthly maximum: NL			

CAT = Corrective action threshold.

NL = No limit; monitor and report.

1/2 Hrs = Once every two (2) hours.

MGD = Million gallons per day.

TIRE = Totalizing, indicating and recording equipment.

1/D = Once every day.

1/W = Once every week.

24-HC = A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the monitored 24-hour period. Where discrete sampling is employed, the permittee shall collect a minimum of twenty-four (24) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum of twenty-four (24) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by 10% or more during the monitored discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

⁽¹⁾ Level 2 standards, excluding that for TRC, must be met at the point of compliance (POC) designated as internal outfall 676. The POC for TRC shall be at the end of the chlorine contact tank or contact period. Exact locations of POCs for all standards shall be specified in the approved operations and maintenance manual of the reclamation system.

⁽²⁾ After disinfection.

⁽³⁾ For the purpose of calculating the geometric mean, bacterial analytical results below the detection level of the analytical method used shall be reported as values equal to the detection level.

⁽⁴⁾ Bacterial samples shall be collected between 10:00 a.m. and 4:00 p.m. to coincide with peak flows to the reclamation system.

⁽⁵⁾ TRC shall be monitored after a minimum contact time of 30 minutes at average flow or 20 minutes at peak flow.

⁽⁶⁾ A properly calibrated pH meter shall be used for all pH analysis of reclaimed water.

⁽⁷⁾ The maximum daily discharge diversion shall not exceed 4.5 million gallons.

⁽⁸⁾ See Part III.B.3.

Results for the above parameters shall be included in the monthly monitoring report submitted to DEQ-NRO by the 10th of each month for the preceding month's performance.

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B. Special Conditions for Water Reclamation and Reuse**1. Submittal of a Reclaimed Water Management Plan**

At least 120 days before the reclamation system is placed into operation, the permittee shall submit a final Reclaimed Water Management (RWM) plan containing the requirements identified in 9VAC25-740-100.C to DEQ-NRO. Reclamation and reuse shall not commence until the plan is approved in writing by DEQ-NRO.

The approved RWM plan shall be incorporated by reference and become enforceable under this permit.

2. Prohibitions for Reclamation and Reuse

The following are prohibited:

- a. Direct potable reuse;
- b. The reuse of reclaimed water distributed to one-family or two-family dwellings. This prohibition does not apply to reuses of reclaimed water outside of and on the same property as one-family or two-family dwellings where the reclaimed water is not distributed to such reuses by way of plumbing within the dwellings;
- c. The reuse of reclaimed water to fill residential swimming pools, hot tubs or wading pools;
- d. The reuse of reclaimed water for food preparation or incorporation as an ingredient into food or beverage for human consumption;
- e. Bypass of untreated or partially treated wastewater from the reclamation system or any intermediate unit process to the point of reuse unless the bypass complies with standards and requirements specified in this permit and is for essential maintenance to assure efficient operation;
- f. The return of reclaimed water to the reclaimed water distribution system after the reclaimed water has been delivered to an end user; and
- g. Reduction of the discharge from a VPDES permitted treatment works due to diversion of source water flow for reclamation and reuse such that the physical, chemical or biological properties of the receiving state waters are affected in a manner that would cause a significant adverse impact to other beneficial uses.

3. Reuse Diversion Management and Restriction

During this permit term, per Part III.B.2.g., above, the permittee shall monitor and operate reuse diversions from this facility as set forth:

- a. Until 31 May 2020, the permittee may divert 4.5 MGD of treated effluent for reuse during this permit term.
- b. Commencing 1 June 2020, the following rules shall govern the diversion of treated effluent for reuse, ensuring no significant adverse impact to downstream beneficial uses:
 - 1) The permittee shall monitor the provisional mean daily stream flow as reported at the Potomac River at Point of Rocks stream gaging station; Number 01638500 and any water-supply storage releases coordinated by the Interstate Commission on the Potomac River Basin (ICPRB) Section of the Cooperative Water Supply Operations (CO-OP) at Washington Metropolitan Area (WMA) water-supply storage reservoirs (CO-OP Release). The provisional mean daily flow at station 01638500, minus any flow attributable to a CO-OP Release, shall be recorded and utilized to calculate a moving seven-day average of the provisional mean daily Potomac River flow at the Point of Rocks station (Q_{por}). The aforementioned calculations shall not include those CO-OP Releases that are strictly for whitewater and non-whitewater recreation or artificial variable flow and water quality purposes.
 - 2) The permittee may divert 100% of the treated effluent for reuse, not to exceed 4.5 MGD, when the moving seven-day average Q_{por} , as calculated above, is greater than 1,400 cubic feet per second (cfs).

- 3) When the moving seven-day average Q_{por} is less than or equal to 1,400 cfs but greater than 805 cfs, as calculated above:
 - a) The permittee may divert up to 2.25 MGD of treated effluent for reuse during any month;
 - b) The permittee may divert up to 4.5 MGD of treated effluent for reuse, during the months of September, October and November when the water supply storage at both the Jennings Randolph and Little Seneca reservoirs is greater than or equal to 85% of storage capacity.
- 4) When the moving seven-day average Q_{por} , as calculated above, is less than or equal to 805 cfs, no diversion of treated effluent shall be allowed for reuse.
- c. Should the permittee wish to divert additional treated effluent for reuse during the above restrictions, a plan may be submitted to DEQ-NRO for review and approval on or before 1 December 2019. This plan shall ensure that the Potomac River flows are maintained in such a way as to comply with Part III.B.2.g. of this permit.

4. River Flow Monitoring

The permittee shall develop a standard operating procedure (SOP) to (1) monitor and record the provisional mean daily stream flow at the stream gaging station Number 01638500; (2) coordinate with CO-OP regarding any water-supply storage releases coordinated by the Interstate Commission on the Potomac River Basin (ICPRB) Section of the Cooperative Water Supply Operations (CO-OP) at Washington Metropolitan Area (WMA) water-supply storage reservoirs (CO-OP Release); and (3) calculate the moving seven-day average of the provisional mean daily Potomac River flow as stipulated in Part III.B.3.b.1. The SOP shall be submitted to DEQ-NRO for review and approval concurrently with the Reclaimed Water Management Plan 120 days prior to commencing reuse operations. Once approved, the permittee shall incorporate these procedures into the Reclaimed Water Management Plan.

The approved SOP shall be incorporated by reference and become enforceable under this permit.

5. Nuisance Conditions

There shall be no nuisance conditions (e.g. ponding water that attracts mosquitoes or other vectors; strong odors that the Department determines are the subject of frequent and wide spread complaints from the surrounding community; any condition determined by a court of law to be a nuisance condition) resulting from the distribution, use or storage of reclaimed water.

6. Reclamation and Reuse Reopener

The Board may modify or revoke and reissue this permit if any applicable standards or requirements for water reclamation and reuse promulgated under State Water Control law or regulations promulgated there under, including the *Water Reclamation and Reuse Regulation* (9VAC25-740 et seq.), are more stringent than or are in addition to any standards or requirements for water reclamation and reuse contained within this permit.

7. Submittal of Monitoring Reports

Discharge of reclaimed water from reclamation system and system storage facility to a reclaimed water distribution system, a non-system storage facility or directly to a reuse of the reclaimed water at any time for any duration within a monthly reporting period, shall require monitoring in accordance with Part III.A and submittal of a monthly monitoring report for the discharge.

8. Corrective Action Threshold for Total Residual Chlorine (TRC)

Should reclaimed water reach the corrective action threshold (CAT) for TRC specified in Part III.A of this permit, the operator of the reclamation system shall immediately initiate a review of treatment operations and data to identify the cause of the CAT monitoring results to bring the reclaimed water back into compliance with the standards. Resampling or diversion shall occur within one hour of first reaching the CAT. Procedures for resampling, operational review and diversion shall be as described in the approved operations and maintenance manual for the reclamation system.

If subsequent monitoring results of the resamples collected within one hour of the first CAT monitoring results for TRC continue to reach the CAT, the reclaimed water shall be considered substandard or reject water and shall be diverted to either storage for subsequent additional treatment or retreatment or discharged to a VPDES permitted effluent disposal system provided the reject water meets applicable effluent limits. If the reclamation system is unattended, the diversion of reject water shall be initiated and performed with automatic equipment.

There shall be no automatic restarts of distribution to reuse until the treatment problem is corrected. Failure to divert the substandard or reject water after one hour of CAT monitoring results shall be considered a violation of this permit. Upon resuming discharge of reclaimed water to the reclaimed water distribution system for which the CAT was reached, resampling for TRC shall occur within one hour to verify proper treatment.

9. Corrective Action Threshold for Bacteria

Should the reclaimed water reach the CAT for *E. coli* specified in Part III.A of this permit, the operator of the reclamation system shall immediately initiate a review of treatment operations and data to identify the cause of the CAT monitoring results to bring the reclaimed water back into compliance with the standards. Procedures for operational review shall be as described in the approved operations and maintenance manual for the reclamation system. Two consecutive bacterial monitoring results that reach the CAT of the standards shall be considered a violation of this permit.

10. Failure to Resample

Failure to resample after determination that monitoring results are not in compliance with the CAT standards for reclaimed water in Part III.A, or to divert or discharge substandard or reject water in accordance with Part III.B.8. shall be deemed a violation of this permit.

11. Class Operator

The classification of the operator for the reclamation system is Class I. The permittee shall employ or contract at least one operator who holds a current Class I license and the license shall be issued in accordance with Title 54.1 of the Code of Virginia and the regulations of the Board for Waterworks and Wastewater Works Operators. The permittee shall notify DEQ-NRO in writing when compliance with this requirement is not being achieved or it is anticipated that compliance with this requirement will not be achieved. The notification shall include a statement of reasons and a prompt schedule for achieving compliance.

The reclamation system shall be manned while in operation and under the supervision of the Class I operator unless the system is equipped with remote monitoring and, as applicable, automated diversion of substandard or reject water in accordance with Part III.B.8. of this permit.

12. Operation and Maintenance Manual

Within 90 days of placing the new reclamation system into operation, the permittee shall submit to the DEQ-NRO changes to the operations and maintenance (O&M) manual for the Leesburg Water Pollution Control Facility addressing the operation and maintenance of the reclamation system and reclaimed water distribution system. These changes shall reflect the practices and procedures followed by the permittee to ensure compliance with the permit. Upon approval, these changes to the O&M manual shall be incorporated into the existing document and be an enforceable part of the permit.

The operations and maintenance manual shall be maintained on site at the Leesburg Water Pollution Control Facility and shall, at a minimum, contain the following related to the operations and maintenance of the reclamation system and reclaimed water distribution system:

- a. A description of unit treatment processes within the reclamation system, components within the distribution system and step-by-step instructions for the operation of these treatment processes and mechanical components;
- b. A description of all appurtenances associated with the reclamation system (i.e. storage facilities, distribution system etc.), step-by-step instructions for their operation and a description of their maintenance;

- c. Routine maintenance and schedules of maintenance for each unit treatment process in the system;
- d. Routine and unplanned inspection of the distribution system, including required inspections for the cross-connection and backflow prevention program contained within the approved RWM plan;
- e. Routine maintenance and schedules of maintenance for all components of the distribution system. Maintenance shall include, but not limited to, initial and routine flushing of the distribution system, measures to prevent or minimize corrosion, fouling and clogging of distribution lines and detection and repair of broken distribution lines, flow meters or pumping equipment. Discharge of flushing water to surface waters from the distribution system is prohibited unless authorized by a VPDES permit;
- f. Descriptions of the following that shall comply with the standard and conditions of this permit:
 - 1) Reclaimed water sampling and monitoring procedures and equipment. This shall include, but is not limited to, a description of sample handling, preservation and chemical analyses and calibration and schedules of calibration for monitoring equipment;
 - 2) The sampling location[s] for the point[s] of compliance; and
 - 3) Control system, alarm functions, record keeping and reports.
- g. Hours of reclamation system operation, hours that the system will be staffed, procedures to be followed by the staff during a period when a licensed operator in responsible charge is not present at the system and training of the staff regarding operation and maintenance of the system;
- h. The physical steps and procedures to be followed by the operator when substandard water is being produced, including resampling and operational review required in accordance with Part III.B.8. and 9. of this permit;
- i. The physical steps and procedures to be followed by the operator when the treatment works returns to normal operation and acceptable quality reclaimed water is again being produced;
- j. Responsible officials and their duties, roles and contact information;
- k. Procedures necessary for the proper management of sludge or residuals from reclamation treatment and for handling and disposal of any wastes or wastewater generated by maintenance of the distribution system in a manner protective of the environment;
- l. A contingency plan to eliminate or minimize the potential to deliver untreated or inadequately treated water from the reclamation system to reuse areas. The plan shall identify the person(s) responsible for implementing the contingency plan and their contact information;
- m. Location of back up or replacement parts critical to the operation of unit treatment processes within the reclamation system;
- n. A list of chemicals and materials in storage areas and the location of storage areas; and
- o. A plan for inactivation or closure of the reclamation system specifying what steps will be taken to protect the environment and public health. Inactivation or closure may include, but it not limited to, replacement through expansion or upgrade or permanent closure of the existing system. At a minimum, the closure plans shall contain the following:
 - 1) A list and characterization (i.e. volume, percent solids, nutrient content etc.) of residual reclaimed or reject water, solids and waste products that are anticipated to be present at the reclamation system site upon inactivation or closure and a description of treatment, removal and final disposition of the same; and
 - 2) Supplemental information. Within 90 days of initiating any activities to inactivate or closure the reclamation system, the permittee shall submit to DEQ-NRO for approval the following information to supplement the previously approved plan:

- a) Verification of elimination of sources of wastewater and/or an alternate treatment scheme;
- b) A description of removal, demolition and/or disposal of structures, equipment, piping and appurtenances;
- c) A description of site fill material, grading and erosion and sediment control;
- d) A description of access control during inactivation or closure;
- e) Proposed land use (post closure) of the site;
- f) Proposed dates for commencing and completing the work; and
- g) Any new or additional information that modifies procedures or information provided in the previously approved inactivation or closure plan.

13. Minimizing Losses

The reclaimed water distribution system shall be maintained to minimize losses and to ensure safe and reliable conveyance of reclaimed water, such that the reclaimed water in the distribution system will not be degraded to a quality that violates the standards in this permit for the intended reuse of the reclaimed water specified in the approved RWM plan.

14. Storage

Reclaimed water system storage facilities shall be designed and operated to prevent a discharge to surface waters of the state except in the event of a storm greater than the 25-year, 24-hour storm. Reclaimed water non-system storage facilities, including landscape impoundments used for non-system storage, shall be designed and operated to prevent a discharge to surface water of the state except in the event of a storm greater than the 10-year, 24-hour storm.

15. Freeboard

The permittee shall maintain a minimum freeboard of two feet at all times in the system storage facility. Non-compliance with the minimum two-foot freeboard requirement at any time shall be reported orally and in writing by the permittee to the DEQ-NRO in accordance with Part II.I of this permit.

16. Storage Inventory

A current inventory of reject water storage, system storage and non-system storage facilities located within the service area of the approved RWM plan shall be maintained. For the addition of new storage facilities to the inventory after permit issuance, the permittee shall submit to DEQ-NRO an amended inventory at least 30 days before reclaimed water will be introduced into the new storage facilities. An inventory of reject water storage, system storage and non-system storage facilities shall include the following:

- a. Name or identifier for each storage facility;
- b. Location of each storage facility (including latitude and longitude);
- c. Function of each storage facility (i.e., reject water storage, system storage or non-system storage);
- d. Type of each storage facility (i.e. covered tank, uncovered tank, lined pond, unlined pond etc.); and
- e. Location (latitude and longitude) and distance of the nearest potable water supply well, spring and public water supply intake to each storage facility within 450 feet of that facility.

17. Design Criteria

All reclamation systems, reclaimed water distribution systems and reclaimed or reject water storage facilities authorized by this permit shall be designed in accordance with criteria of the Water Reclamation and Reuse Regulation at 9VAC25-740 et seq.

18. Preliminary Engineer Report

A preliminary engineering report shall be submitted for new reclamation system, satellite reclamation system or reclaimed water distribution system; or for the modification or expansion of the same facilities where they already exist. At the request of the permittee, the DEQ-NRO may waive the need for a preliminary engineering report or portions of a preliminary engineering report for modification or expansion of an existing reclamation system, satellite reclamation system or reclaimed water distribution system as determined by the scope of the proposed project.

19. CTC/CTO

The permittee shall not cause or allow the construction, expansion or modification, and the operation of the reclamation system except in compliance with a certificate to construct (CTC) and shall not cause or allow the operation of the same facility except in compliance with a certificate to operate (CTO) issued by the DEQ.

20. Public Access

There shall be no uncontrolled public access to the reclamation system and/or system storage facilities. System storage ponds shall be enclosed with a fence or otherwise designed with appropriate features to discourage the entry of animals and unauthorized persons.

21. Advisory Signs

For all reuses of reclaimed water treated to Level 2, public access shall be restricted by methods that include, but are not limited to, fencing around the site boundary. Advisory signs or placards shall be posted around reuse areas or reuse site boundaries. Each sign or placard shall:

- a. State the nature of the reuse and no trespassing;
- b. State, at a minimum, "CAUTION: RECLAIMED WATER – DO NOT DRINK"; and
- c. Display the equivalent standard international symbol for non-potable water.

The size of the sign or placard and lettering used shall be such that it can be easily read by a person with normal vision at a distance of 50 feet. Alternate signage and wording that assures an equivalent degree of public notification and protection may be accepted upon approval by DEQ-NRO staff.

22. Advisory Signs for Industrial Sites

For industrial reuses, advisory signs shall be posted around those areas of the industrial site where reclaimed water is used and at the main entrances to the industrial site to notify employees and the visiting public of the reclaimed water reuse. Access control beyond what is normally provided by the industry is not required. Each advisory sign shall meet the specifications as described in Part III.B.22.

23. Above Ground Appurtenances

All above ground portions of the reclaimed water distribution system authorized by this permit, including reclaimed water valves, outlets (including fire hydrants) and other appurtenances, shall be color coded, taped, labeled, tagged or otherwise marked to notify the public and employees that the source of the water is reclaimed water; not intended for drinking or food preparation. Such notification shall also:

- a. Inform employees to practice good personal hygiene for incidental contact with reclaimed water; and
- b. Inform the public to avoid contact with the reclaimed water.

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24. Cooling Tower Spray

A setback distance of 300 feet horizontally shall be provided from an open cooling tower to the site property line where reclaimed water meeting Level 2 standards specified in Part III.A of this permit is used in the tower. No setback distance shall be required from an open cooling tower to the site property line where a drift or mist eliminator is installed and properly operated, or the reclaimed water used in the tower is treated to meet Level 1 disinfection standards contained within 9VAC25-740-70.

25. Worker Contact with Level 2 Reclaimed Water

Worker contact with reclaimed water meeting the Level 2 standards specified in Part III.A. of this permit shall be minimized. Level 1 disinfection of the reclaimed water in accordance with 9VAC25-740 shall be provided when worker contact with the reclaimed water is likely. Windblown spray generated by once-through cooling or recirculating cooling towers that reuse reclaimed water meeting the Level 2 standards specified in Part III.A. of this permit shall not reach areas accessible to workers or the public unless Level 1 disinfection as specified in 9VAC25-740-70 is provided.

26. New End Users

For the addition of new end users or new reuses not contained in the most current approved RWM plan, the permittee shall submit to DEQ-NRO for approval an amendment to the RWM plan identifying new end users or new reuses not less than 30 days prior to connection and reclaimed water service to the new end users or initiating the new reuses. For each new end user or new reuse, the permittee shall also provide all applicable information required by the *Water Reclamation and Reuse Application Addendum*. Should the addition of new end users or new reuses to the RWM plan require the incorporation of additional or different reclaimed water standards, monitoring requirements of special conditions into this permit, modification of the permit may be necessary to authorize distribution of reclaimed water to the new end users or to authorize the new reuses.

27. Interruption of Reclaimed Water Supply

For each interruption or loss of reclaimed water supply or service, the permittee shall report to DEQ-NRO in writing the following information at the time the next reclamation and reuse monthly monitoring report is submitted:

- a. The service area affected by the incident;
- b. The initial date and time of the incident and duration;
- c. The cause of the incident and whether the cause was planned or unplanned; and
- d. A description of steps taken to correct and to prevent the recurrence of the incident.

This report shall also contain a description of any notification provided in accordance with the education and notification program of the approved RWM plan. This special condition is not applicable to supply or service restrictions as required in Part III.B.3. of this permit.

28. Noncompliance Notification

Each discharge of any untreated or partially treated water to the service area of intended reuse that fails to comply with reclaimed water standards contained in Part III.A. of this permit shall be reported by the permittee to DEQ-NRO as a noncompliance in accordance with Part II.I. of this permit.

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29. System Integrity

All leaks and main breaks of the reclaimed water distribution system shall be reported by the permittee upon discovery as follows:

- a. Where the leak of main break discharges or causes or allows a discharge of reclaimed water that may reasonably be expected to enter state waters, the incident shall be reported by the permittee to DEQ-NRO as an unauthorized discharge in accordance with Part II.G. of this permit.
- b. Where the leak of main break does not discharge or cause or allow a discharge of reclaimed water that may reasonably be expected to enter state waters, but may adversely affect state waters or may endanger public health, the incident shall be reported by the permittee to DEQ-NRO as a noncompliance in accordance with Part II.I. of this permit.

30. Recordkeeping

In addition to records specified in Part II.B. of this permit, the permittee shall maintain the following at the reclamation system for the period specified in Part II.B.:

- a. Water reclamation and reuse operating records to include all analyses required for reclaimed water in Part III.A. of this permit, records of operational problems, alarm failures, unit process and equipment breakdowns, diversions to reject storage or emergency storage, discharge to another permitted reuse system requiring a lower level of treatment, or disposal via a permitted effluent discharge and all corrective or preventive action taken.
- b. A monthly summary of the operating records specified in a. of this condition.

31. Annual Water Reclamation and Reuse Report

The permittee shall submit an annual report for the reclaimed water distribution system covering a 12-month period from January 1st through December 31st to DEQ-NRO on or before February 10th of the following year. The annual report shall, at a minimum, include the estimated volume of reclaimed water distributed to the service area of the RWM plan, reported as monthly totals.

BIOSOLIDS CONDITIONS AND REQUIREMENTS

A. Biosolids Limitations and Monitoring Requirements

During the period beginning with the permit's effective date and lasting until the permit expiration date, in accordance with 9VAC25-31-420 through 720 and 9VAC25-32-303 through 358, the limitations, conditions and requirements set forth in this permit and the approved Biosolids Management Plan, the permittee is authorized to produce, market and distribute exceptional quality (EQ) biosolids. The permittee shall ensure that all biosolids marketed and distributed in Virginia through this permit are monitored in accordance with the monitoring requirements herein. All samples shall be collected and analyzed in accordance with EPA 40 CFR Part 503 and the approved Biosolids Management Plan.

EQ Biosolids marketed and distributed under this permit shall contain pollutant concentrations below the ceiling and PC limits as set forth herein. EQ biosolids shall be treated to the Class A pathogen and vector attraction reduction (VAR) standards.

1. Biosolids Annual Production Monitoring (SP1)

The permittee shall report the annual total amount of sludge produced (in dry metric tons) and annual amount of EQ biosolids (in dry metric tons) distributed for land application.

Data shall be reported on the Discharge Monitoring Report (DMR) for discharge number SP1.

2. Biosolids Chemical Limitations and Monitoring Requirement (S01)

Pollutants in Exceptional Quality biosolids that are generated under the authority of this permit and distributed for land application shall be monitored and limited as specified below. Biosolids shall not be distributed if the concentration of any pollutant in the biosolids exceeds the ceiling limitation of that pollutant.

Biosolids Characteristic ⁽¹⁾	PC / CPLR Limitations ⁽¹⁾	Ceiling Limitations	Monitoring Requirements	
	<u>Monthly Average</u> ⁽²⁾	<u>Concentration Maximum</u> ⁽²⁾	<u>Frequency</u> ⁽³⁾	<u>Sample Type</u>
Percent Solids (%)	NL	NA	1/Q	Composite
Arsenic, Sludge	41 mg/kg	75 mg/kg	1/Q	Composite
Cadmium, Sludge	39 mg/kg	85 mg/kg	1/Q	Composite
Copper, Sludge	1500 mg/kg	4300 mg/kg	1/Q	Composite
Lead, Sludge	300 mg/kg	840 mg/kg	1/Q	Composite
Mercury, Sludge	17 mg/kg	57 mg/kg	1/Q	Composite
Molybdenum, Sludge	NL	75 mg/kg	1/Q	Composite
Nickel, Sludge	420 mg/kg	420 mg/kg	1/Q	Composite
Selenium, Sludge	100 mg/kg	100 mg/kg	1/Q	Composite
Zinc, Sludge	2800 mg/kg	7500 mg/kg	1/Q	Composite

NA = Not applicable.

NL = No limit; monitor and report.

1/Q = Once every calendar quarter.

mg/kg = Milligrams per kilogram, dry weight.

⁽¹⁾ All parameters are subject to pollutant concentrations (PC), cumulative pollutant loading rates (CPLR) and ceiling limits. PC biosolids contain the constituents identified above at concentrations below the monthly average specified herein. CPLR biosolids contain the constituents identified above at concentrations above the monthly average and each sample must be below the maximum concentration specified herein.

⁽²⁾ All limits and criteria are expressed on a dry weight basis.

⁽³⁾ The quarterly monitoring periods shall be January through March, April through June, July through September and October through December.

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3. Pathogen Reduction Requirements (S01)

Biosolids shall be treated to meet Class A Pathogen Reduction standards and the vector attraction reduction (VAR) standards and monitored to verify class A pathogen reduction prior to distribution and marketing or land applying biosolids. The biosolids shall be monitored and limited in accordance with the treatment option selected and used by the permittee as identified below:

Treatment Option	Class A Pathogen Reduction Treatment Standards	Monitoring Requirements
Class A Pathogen Reduction Alternative 5: Processes To Further Reduce Pathogens (PFRP): Option 2	Either the density of fecal coliform in the sewage sludge shall be less than 1,000 Most Probable Number per gram of total solids (dry weight basis), or the density of Salmonella, sp. Bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; or at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in 9VAC25-31-510 B, C, E or F.	1/Q ⁽¹⁾
	Heat Drying. Sewage sludge is dried by direct or indirect contact with hot gasses to reduce the moisture content of the sewage sludge to 10.0% or lower. Either the temperature of the sewage sludge particles exceeds 80° C or the wet bulb temperature of the gas in contact with the sewage sludge as the sewage sludge leaves the dryer exceeds 80° C.	(2)
VAR Option 8	Where biosolids contain unstabilized solids from primary wastewater treatment, the percent solids of the biosolids shall be $\geq 90\%$ (9VAC25-32-685.B.8.).	1/Q ⁽¹⁾

⁽¹⁾ Between sampling events, operating records shall demonstrate that the wastewater treatment plant (WWTP) is operating at a performance level known to meet pathogen reduction and VAR standards.

⁽²⁾ Process monitoring shall be sufficient to demonstrate compliance with PFRP and VAR treatment requirements.

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B. EQ Biosolids Distribution and Marketing: Management and Reporting Requirements

1. Approved Biosolids Source Requirement

Only biosolids from a source that has been approved by the DEQ, as identified on the DEQ's *Sources of Biosolids, Industrial Sludges, WTP Residuals* list and treated to meet metals limits, pathogen reduction and VAR standards as set forth in Part IV of this permit, shall be given to any person for the purpose of land application.

2. Distribution and Marketing of EQ Biosolids

a. This permit authorizes the distribution and marketing of EQ to the public.

b. Exceptional quality biosolids

1). Only exceptional quality biosolids produced from a DEQ approved sludge processing facility can be distributed or marketed.

2). Only biosolids that meet the pollutant concentrations in Part IV.A.2., Class A pathogen reduction and one of the first 8 vector attraction reduction methods, or mixtures of exceptional quality biosolids with other materials such that the mixture achieves the Class A pathogen control standard shall be sold or distributed under this permit. Distribution or marketing of Class A biosolids that have been mixed with inert materials may be approved on a case-by-case basis. Inert materials shall not contain pathogens or attract vectors.

c. Registration with the Virginia Department of Agriculture and Consumer Services (VDACS). Exceptional quality biosolids marketed or distributed as fertilizers or soil conditioners must be registered or licensed with the VDACS. The permit applicant shall maintain the VDACS registration or license for the duration of this permit.

d. Exceptional quality biosolids may be marketed or distributed in bulk, bag or other container. Other container is an open or closed receptacle with a load capacity of one metric ton or less, such as a box, bucket, carton, vehicle or trailer.

e. Product Labeling: Information shall be provided to users of marketed or distributed biosolids in the form of a label affixed to a bag or a brochure, as required by the biosolids management plan. The information shall include the following:

1). The name and address of the preparer of the biosolids;

2). A statement explaining that application of the biosolids to the land is prohibited except in accordance with the instructions on the label or information sheet; and

3). Information required by regulations promulgated by the Virginia Department of Agriculture and Consumer Services under § 3.2-3601 and the labeling provisions of § 3.2-3611 of the Code of Virginia.

3. Biosolids Monitoring Frequency and Reporting Requirements

a. Monitoring Frequency

The monitoring frequency shall be once per calendar quarter (1/Q). The monitoring frequency may be increased during this permit term upon written notification by DEQ if deemed necessary.

b. Annual Report

The permittee shall submit an Annual Report not later than February 19th of each year to the DEQ-Northern Regional Office. Each report is for the previous calendar year's activity. If no biosolids were generated and provided to a land applier under this permit during the reporting year, a report shall be submitted stating that no biosolids were generated or delivered during the year.

The report shall include at minimum:

- 1). Name of Permittee, DEQ permit number and dates of activity;
- 2). Monitoring Reports as required by Part IV.A and supporting documentation; including operator logs, laboratory chain of custody forms and certificates of analyses;
- 3). A description of how pathogen reduction was met and the data demonstrating compliance with the selected alternative;
- 4). A description of how the Vector Attraction Reduction alternative used by the generator was met and the data that demonstrate compliance with the applicable alternative;
- 5). Total amount in dry tons of biosolids distributed in a bag or other container per year;
- 6). Total amount in dry tons of biosolids distributed in bulk per year.
- 7). Documentation of current registration with VDACS, if such registration is required by VDACS;
- 8). Name of responsible representative of permittee and a statement signed and dated by that representative indicating that the information submitted has been verified by that representative as correctly reported in accordance with the Part II.K.

4. Record Keeping

The permittee is required to retain the following information for at least five years:

- a. The concentrations of each pollutant in Parts IV.A.2.;
- b. A description of how the pathogen reduction requirements in Parts IV.A.3. are met;
- c. A description of how the vector attraction reduction requirements in Parts IV.A.3. are met;
- d. A description of how the management practices specified in the approved Biosolids Management Plan and this permit are met; and
- e. The following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the Class A pathogen requirements in 9VAC25-31-710.A and the vector attraction reduction requirements in 9VAC25-31-720.B.8 was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment".

(The remainder of this page intentionally left blank)

5. Biosolids Management Plan (BSMP)

- a. The permittee shall conduct all biosolids/sewage sludge use or disposal activities in accordance with the Biosolids Management Plan approved with the reissuance of this permit. The permittee shall maintain the BSMP which consists of the following components:
 - 1) The materials developed and submitted at the time of permit application or permit modification in accordance with 9VAC25-31-100.Q;
 - 2) The Operations and Maintenance (O&M) Manual (sections regarding solids handling and biosolids production and management, etc); and
 - 3) The Odor Control Plan (OCP). The OCP shall include at a minimum:
 - a) Methods used to minimize odor in producing biosolids;
 - b) Methods used to identify malodorous biosolids before delivery to the land applier (at the generating facility);
 - c) Methods used to identify and abate malodorous biosolids if delivered to the field, prior to land application; and
 - d) Methods used to abate malodor from biosolids if land applied.
- b. The BSMP and all of its components shall be incorporated by reference and is an enforceable part of this permit.

6. Biosolids/Sludge Reopener

The Board may promptly modify or revoke and reissue this permit if any applicable standard for biosolids and/or sewage sludge use or disposal promulgated under Section 405(d) of the Clean Water Act is more stringent than any requirements for biosolids/sludge use or disposal in this permit, or controls a pollutant or practice not limited within this permit.

7. Biosolids Use and Disposal

The permittee shall conduct all biosolids use or disposal activities in accordance with the Biosolids Management Plan approved with the issuance of this permit. Any proposed changes in the biosolids use or disposal practices or procedures followed by the permittee shall be documented and submitted for DEQ-Northern Regional Office (DEQ-NRO) approval 90 days prior to the effective date of the changes. Upon approval, the revised Biosolids Management Plan shall be incorporated by reference and becomes an enforceable part of the permit. The permit may be modified or alternatively revoked and reissued to incorporate limitations or conditions necessitated by substantive changes in biosolids use or disposal practices.